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(19) **United States**(12) **Patent Application Publication****Xue et al.**(10) **Pub. No.: US 2014/0035116 A1**(43) **Pub. Date: Feb. 6, 2014**(54) **TOP EXPOSED SEMICONDUCTOR CHIP PACKAGE**(71) Applicant: **Alpha and Omega Semiconductor Incorporated**, Sunnyvale, CA (US)(72) Inventors: **Yan Xun Xue**, Los Gatos, CA (US);
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USPC **257/676**(57) **ABSTRACT**

A semiconductor package and it manufacturing method includes a lead frame having a die pad, and a source lead with substantially a V groove disposed on a top surface. A semiconductor chip disposed on the die pad. A metal plate connected to a top surface electrode of the chip having a bent extension terminated in the V groove in contact with at least one of the V groove sidewalls.

